5. A vector containing the polynucleotide of claim 2.

6. A host cell containing the vector of claim 5.

7. A method for using a polynucleotide to produce a protein comprising:

a) culturing the host cell of claim 6 under conditions for the expression of the protein; and

b) recovering the protein from the host cell culture.

8. A method for using a polynucleotide to detect expression of a nucleic acid in a sample, the method comprising:

a) hybridizing the polynucleotide of claim 2 to nucleic acids of the sample, thereby forming a hybridization complex; and

b) detecting hybridization complex formation, wherein complex formation indicates the expression of the polynucleotide in the sample.

9. The method of claim 8 wherein the polynucleotide is attached to a substrate or bonded to the surface of a microarray.

10. The method of claim 8 wherein the nucleic acids of the sample are amplified prior to hybridization.

11. A method of using a polynucleotide to screen a plurality of molecules to identify a ligand, the method comprising:

a) combining the polynucleotide of claim 2 with a plurality of molecules under conditions to allow specific binding; and

b) detecting specific binding, thereby identifying a ligand which specifically binds the polynucleotide.

12. The method of claim 11 wherein the molecules are selected from DNA molecules, RNA molecules, peptide nucleic acids, artificial chromosome constructions, peptides, and transcription factors.

13. A method for diagnosing a disease associated with gene expression in a sample containing nucleic acids, the method comprising:

a) hybridizing a polynucleotide of claim 2 to nucleic acids of the sample under conditions to form a hybridization complex,

b) comparing hybridization complex formation with standards, thereby diagnosing the disease.

14. The method of claim 13 wherein expression is diagnostic of cancer or immune response.

REMARKS

Applicants have canceled claims 1 and 15-20 without prejudice to renewal and reserve the right to prosecute these claims in subsequent divisional applications. Applicants have amended claims 2-4; no new matter was introduced by these amendments to the claims.